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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

**FCC MAIL ROOM**  
In the matter of

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Petition for allocation of spectrum  
for the Private Mobile Radio Service

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**RM-9267**

To: The Commission

**Comments submitted by  
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**Introduction**

The Land Mobile Communications Council has petitioned the Commission for additional spectrum to be allocated to the Private Mobile Radio Services. I have no doubt there is need to accommodate more users in this service, but I believe the LMCC has ignored or grossly underestimated the adverse effects that one portion of their request would have on the Amateur Radio Service. I refer to the proposal to immediately reallocate 420-430 MHz and 440-450 MHz.

**The Commenter**

My interest in this petition is a result of my involvement in amateur radio. I have been a licensed radio amateur since 1959 and have been active in several amateur organizations and have explored several facets of amateur operation. I have also been involved in radio professionally, having held a Commercial Radiotelephone License since 1964, having been the Chief Engineer of one broadcast station and having been employed by others.

**Summary**

I hope to establish three points:

1. The Amateur Radio Service is a valuable service and should not be dismissed as non-essential and, therefore, an easy "target" when additional frequencies are needed elsewhere.
2. The current proposal would cause extreme adverse effects upon the Amateur Radio Service and its ability to function.

3. As growth continues for almost all users of the radio spectrum, but the amount of spectrum is fixed, we must all look for solutions other than taking frequencies away from one another.

### **The Amateur Radio Service is Valuable**

I hope the mention in the instant petition of the number of Fortune-500 companies with an interest in PMRS is not intended to imply that a radio service's importance is to be judged entirely on the financial benefit it creates. If judged in terms of the amount of money that changes hands, the Amateur Radio Service would seem to be a relatively unimportant radio service. Its operators receive no compensation for their efforts. They usually make their own radio installations and make little use of the communications service companies upon which land mobile users rely. They build and maintain their own repeaters. In fact, by definition, amateur licensees may have no pecuniary interest in their amateur operation. However, in its long history, the Amateur Radio Service has proved valuable to the nation in several ways.

Amateur Radio allows and encourages the self-training of operators to become trained operators, technicians, and electronic experts (as set forth in Part 97.1(d) of the Commission's rules). The value of the service became particularly apparent during World War II, when a pool of individuals trained in the radio art was already available in the country's amateur radio operators.

I can testify to the value of the service in this area from my own experience. It was the interest in electronics gained through amateur radio operation in my teenage years that caused me to pursue a career in electronics. A large number of the amateur operators I knew in high school went on to become technicians and engineers. We felt that in college, our amateur radio experience gave us a head start in the fields and many insights that our fellow students lacked.

As we find ourselves in a period where there is a shortage of trained technical people, encouragement of the Amateur Service seems particularly important. The maintenance of a strong Amateur Radio Service will ultimately benefit many areas including PMRS.

Amateur operators have repeatedly volunteered their time, their expertise, and their equipment for emergency communications when made necessary by fire, flood, earthquake, hurricane, or other type of disaster. The most recent examples involved midwestern tornadoes and eastern ice storms during this past winter. These emergency communications are provided at no cost to the government or the public.

Amateur radio has also played a part in development of new technologies. It was amateur operators who first discovered the long-distance communication possible in the HF frequency range. The first parametric amplifier was used in amateur radio service. It was amateurs who during the 1980's perfected a low-cost digital "packet" radio system that has since been used with little or no modification by commercial and military interests. Amateurs continue to experiment with meteor scatter, synchronous digital modes, ACSSB, and other techniques that

may bring utility to all radio services.

For good reason, the Commission has continued to maintain spectrum allocations for the Amateur Radio Service. It would be a great loss to the country if this service were to be crippled.

### **The Instant Petition Would Cause Severe Harm**

The frequency range 420-450 MHz was exclusively assigned to the Amateur Radio Service in the early 1950's. Later in that decade the band was allocated to the Government Radiolocation Service with the Amateur Service having secondary access. Because of the usage patterns of the government service, amateurs in most parts of the country have had virtually full access to this segment. The LMCC's petition would make PMRS the primary user of two-thirds of this segment, with the Amateur Radio Service remaining in secondary status. It offers no plan for how sharing might be accomplished.

The greatest need for PMRS channels would almost certainly be in the same geographic areas where the need for amateur radio spectrum is the greatest: the larger metropolitan areas. The appetite of the Land Mobile community for additional spectrum has seemed insatiable in recent years, which makes it appear likely that these segments would quickly be filled, effectively denying access to amateur users.

The petition acknowledges that the Amateur Service would see a "net constriction." It would appear that loss of two-thirds of the second most heavily used amateur band would be better described as major devastation. Almost all repeater and FM simplex activity is in the 440-450 MHz segment. In my own area alone, approximately 70 repeaters that I can now access, would be put off the air. The 420-430 MHz segment is used heavily for repeater interties, control links, and amateur television.

Currently, experimentation with amateur television repeaters takes place in the 420-450 MHz band. Because a standard television signal requires 6 MHz of bandwidth, and because input and outputs must be on independent frequencies with some reasonable spacing between them, such repeaters (including one my club is now building) could not be accommodated at all if only 10 MHz were left to the Amateur Radio Service.

The devastation would not end with the 420-450-MHz segment. Due to the fact that the best repeater sites are at locations where operators are not normally present, combined with the Commission's control operator requirements, most useful repeaters must have remote control links. Such links are not allowed in the most popular amateur band, the 144-148 MHz band, nor in the 50-54 MHz band, so even the repeaters on these bands are usually controlled in the 420-450 MHz band. Therefore, the net result of the instant petition would be to force out of service most of the VHF and UHF repeaters in the Amateur Radio Service. That the result would be "a net constriction" is a gross understatement.

## **We Must Go Beyond Just Asking for More Space**

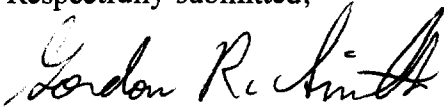
The Commission is, no doubt, painfully aware of the fact that the amount of UHF spectrum is fixed, while demands for it are rapidly increasing on many fronts. It would appear that all users of the radio spectrum must go beyond the mindset of trying to take away spectrum from another service whenever existing allocations become crowded. We must all find alternative ways to increase our user bases while staying within existing spectrum.

Many techniques for spectrum economy have been demonstrated in recent years. They include use of more spectrum-efficient modes, moving radio links to wire, cable, and fiber where possible, use of lower power and directional antennas so frequencies may be reused at closer geographic intervals, time multiplexing, and digital compression. Amateurs are experimenting in all these areas. If the Amateur Service is allowed to remain strong, it may help in the development and perfection of new techniques that may be of benefit to all, including the PMRS.

### **Conclusion**

It is hoped the Commission will deal the phenomenal blow against the Amateur Radio Service that LMCC is requesting. It is hoped that when government use of the 420-450 MHz segment is no longer required, the Commission will consider returning it to primary use by the Amateur Radio Service.

Respectfully submitted,



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